Page 4, line 21, delete "At" and insert therefore --As--.

Page 5, line 8, delete "Q10" and insert therefore --Q20--.

Page 26, line 34, delete "9" and insert therefore --11--.

IN THE CLAIMS:

Please CANCEL claims 1-8.

Please ADD new claims 9-45 as follows:

--9. (NEW) A method of carrying out simulation of a circuit, comprising:

extracting, from the circuit to be simulated, a plurality of partial circuits to inspect for equivalent operational characteristics;

inspecting the plurality of partial circuits to detect partial circuits exhibiting equivalent operational characteristics, based on the configurations of the plurality of partial circuits; and

carrying out circuit simulation after the circuit is compressed by integrating the partial circuits exhibiting equivalent operational characteristics into one circuit.

10. (NEW) The method of claim 9, wherein said inspecting the plurality of partial circuits is based on the connectional relationships of at least one of the corresponding input terminals and output terminals of the plurality of partial circuits.

11. (NEW) The method of claim 9, wherein said inspecting the plurality of partial circuits is based on the operational characteristics of corresponding component elements of the plurality of partial circuits.

12. (NEW) The method of claim 9, wherein the circuit to be simulated is a MOS circuit comprising a plurality of MOS semiconductor devices.

13. (NEW)   The method of claim 9, further comprising judging equivalence when the configurations of the plurality of partial circuits are mutually consistent.

14. (NEW)   The method of claim 9, further comprising judging non-equivalence when the configurations of the plurality of partial circuits are mutually inconsistent.

15. (NEW)   The method of claim 9, further comprising assessing the intensity of ~~influence of an external terminal of the circuit by tracing paths linking the~~ external terminal and given terminals of the plurality of partial circuits.

16. (NEW)   The method of claim 15, wherein said inspecting the plurality of partial circuits is based on the intensity of the influence of the external terminal.

17. (NEW)   The method of claim 15, wherein the circuit to be simulated is a MOS circuit comprising a plurality of MOS semiconductor devices.

18. (NEW)   The method of claim 9, wherein said assessing the intensity of influence of an external terminal is determined as the frequency of shifting from the source or drain of a MOS semiconductor device to the gate thereof while tracing a path linking the external terminal and a given terminal of each of the plurality of partial circuits.

19. (NEW)   The method of claim 9, wherein when the connectional relationships of at least one of the corresponding input terminals and output terminals of the plurality of partial circuits are judged to be mutually inconsistent, a plurality of other partial circuits connected to at least one of the corresponding input terminals and output terminals are inspected for quasi-equivalent circuits, and when the plurality of other partial circuits are judged as quasi-

equivalent circuits, the plurality of partial circuits are regarded as exhibiting equivalent operational characteristics.

20. (NEW)   The method of claim 9, wherein when the plurality of partial circuits are inspected for equivalence, a unique element having no counterpart within the circuit to be simulated is detected, and if a terminal that has not been judged to be a unique terminal having no counterpart is included in the terminals connected to the unique element, the terminal is newly judged to be a unique terminal, and the plurality of partial circuits connected to the newly judged unique terminal are inspected for equivalence.

21. (NEW)   A system for carrying out simulation of a circuit, comprising:

a circuit extracting unit for extracting, from the circuit to be simulated, a plurality of partial circuits to inspect for equivalent operational characteristics;

a storage unit for holding data concerning configurations of the plurality of partial circuits; and

a circuit-equivalence inspecting unit for detecting partial circuits exhibiting equivalent operational characteristics by inspecting the plurality of partial circuits on the basis of the configurations of the plurality of partial circuits,

wherein circuit simulation is carried out after the circuit is compressed by integrating the partial circuits exhibiting equivalent operational characteristics into one circuit.

22. (NEW)   The system of claim 21, wherein said storage unit holds data concerning the connectional relationships of at least one of the corresponding input terminals and output terminals of the plurality of partial circuits, and said circuit-equivalence inspecting unit detects partial circuits on the basis of the connectional relationships of at least one of the corresponding input terminals and output terminals of the plurality of partial circuits.

23. (NEW)   The system of claim 21, wherein said storage unit holds data concerning the operational characteristics of corresponding component elements of the plurality of partial circuits, and said circuit-equivalence inspecting unit detects partial circuits on the basis of the operational characteristics of corresponding component elements of the plurality of partial circuits.

24. (NEW)   The system of claim 21, wherein the circuit to be simulated is a MOS circuit comprising a plurality of MOS semiconductor devices.

25. (NEW)   The system of claim 21, wherein said circuit-equivalence inspecting unit further comprises a judging unit judging equivalence when the configurations of the plurality of partial circuits are mutually consistent.

26. (NEW)   The system of claim 21, wherein said circuit-equivalence inspecting unit further comprises a judging unit judging non-equivalence when the configurations of the plurality of partial circuits are mutually inconsistent.

27. (NEW)   The system of claim 21, further comprising an assessing unit for assessing the intensity of influence of an external terminal of the circuit by tracing paths linking the external terminal and given terminals of the plurality of partial circuits.

28. (NEW)   The system of claim 27, wherein said circuit-equivalence inspecting unit detects partial circuits on the basis of the intensity of the influence of the external terminal.

29. (NEW)   The system of claim 27, wherein the circuit to be simulated is a MOS circuit comprising a plurality of MOS semiconductor devices.

30. (NEW)   The system claim 29, wherein the intensity of influence of said external terminal is determined as the frequency of shifting from the source or drain of a MOS semiconductor device to the gate thereof while tracing a path linking the external terminal and a given terminal of each of the plurality of partial circuits.

31. (NEW)   The system of claim 21, further comprising a connected-circuit quasi-equivalence inspecting unit inspecting, when said circuit-equivalence inspecting unit judges that the connectional relationship of at least one of the corresponding input terminals and output terminals of the plurality of partial circuits are mutually inconsistent, a plurality of other partial circuits connected to at least one of the corresponding input terminals and output terminals for quasi-equivalent circuits, wherein when said connected-circuit quasi-equivalence inspecting unit judges that the plurality of other partial circuits are quasi-equivalent circuits, the plurality of partial circuits are regarded as exhibiting equivalent operational characteristics.

32. (NEW)   The system of claim 21, wherein when the plurality of partial circuits are inspect for equivalence, said circuit-equivalence inspecting unit detects a unique element having no counterpart within the circuit to be simulated, and if a terminal that has not been judged to be a unique terminal having no counterpart is included in the terminals connected to the unique element, the terminal is newly judged to be a unique terminal, and the plurality of partial circuits connected to the newly judged unique terminal are inspected for equivalence.

33. (NEW)   An apparatus for carrying out simulation of a circuit, comprising:

a circuit extracting unit for extracting, from the circuit to be simulated, a plurality of partial circuits to inspect for equivalent operational characteristics;

a storage unit for holding data concerning configurations of the plurality of partial circuits; and

-6-

a circuit-equivalence inspecting unit for detecting partial circuits exhibiting equivalent operational characteristics by inspecting the plurality of partial circuits on the basis of the configurations of the plurality of partial circuits,

wherein circuit simulation is carried out after the circuit is compressed by integrating the partial circuits exhibiting equivalent operational characteristics into one circuit.

34. (NEW)   The apparatus of claim 33, wherein said storage unit holds data concerning the connectional relationships of at least one of the corresponding input terminals and output terminals of the plurality of partial circuits, and said circuit-equivalence inspecting unit detects partial circuits on the basis of the connectional relationships of at least one of the corresponding input terminals and output terminals of the plurality of partial circuits.

35. (NEW)   The apparatus of claim 33, wherein said storage unit holds data concerning the operational characteristics of corresponding component elements of the plurality of partial circuits, and said circuit-equivalence inspecting unit detects partial circuits on the basis of the operational characteristics of corresponding component elements of the plurality of partial circuits.

36. (NEW)   The apparatus of claim 33, wherein the circuit to be simulated is a MOS circuit comprising a plurality of MOS semiconductor devices.

37. (NEW)   The apparatus of claim 33, wherein said circuit-equivalence inspecting unit further comprises a judging unit judging equivalence when the configurations of the plurality of partial circuits are mutually consistent.

38. (NEW)   The apparatus of claim 33, wherein said circuit-equivalence inspecting unit further comprises a judging unit judging non-equivalence when the configurations of the plurality of partial circuits are mutually inconsistent.

39. (NEW)   The apparatus of claim 33, further comprising an assessing unit for assessing the intensity of influence of an external terminal of the circuit by tracing paths linking the external terminal and given terminals of the plurality of partial circuits.

40. (NEW)   The apparatus of claim 39, wherein said circuit-equivalence inspecting unit detects partial circuits on the basis of the intensity of the influence of the external terminal.

41. (NEW)   The apparatus of claim 39, wherein the circuit to be simulated is a MOS circuit comprising a plurality of MOS semiconductor devices.

42. (NEW)   The apparatus of claim 41, wherein the intensity of influence of said external terminal is determined as the frequency of shifting from the source or drain of a MOS semiconductor device to the gate thereof while tracing a path linking the external terminal and a given terminal of each of the plurality of partial circuits.

43. (NEW)   The apparatus of claim 33, further comprising a connected-circuit quasi-equivalence inspecting unit inspecting, when said circuit-equivalence inspecting unit judges that the connectional relationship of at least one of the corresponding input terminals and output terminals of the plurality of partial circuits are mutually inconsistent, a plurality of other partial circuits connected to at least one of the corresponding input terminals and output terminals for quasi-equivalent circuits,

-8-

wherein when said connected-circuit quasi-equivalence inspecting unit judges that the plurality of other partial circuits are quasi-equivalent circuits, the plurality of partial circuits are regarded as exhibiting equivalent operational characteristics.

44. (NEW)   The apparatus of claim 33, wherein when the plurality of partial circuits are inspect for equivalence, said circuit-equivalence inspecting unit detects a unique element having no counterpart within the circuit to be simulated, and if a terminal that has not been judged to be a unique terminal having no counterpart is included in the terminals connected to the unique element, the terminal is newly judged to be a unique terminal, and the plurality of partial circuits connected to the newly judged unique terminal are inspected for equivalence.

45. (NEW)   A method for simulating a circuit, comprising:

extracting and inspecting a plurality of partial circuits, from the circuit to be simulated, for equivalent operational characteristics based on the configurations of the partial circuits; and

integrating the equivalent partial circuits into one circuit to which circuit simulation is applied.

REMARKS

Claims 1-8 were pending in this application and stand rejected. Applicant cancels claims 1-8 and adds new claims 9-45. Applicant has also presented amendments to correct various minor errors in the specification.